

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

IN RE PATENT APPLICATION OF: David D. ROWLEY et al.  
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FOR: SYSTEM AND METHOD FOR DISTANCE LEARNING

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**APPELLANTS' BRIEF ON APPEAL UNDER 37 C.F.R. § 41.37**

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA. 22313-1450

Dear Sir:

Further to the Final Office Action mailed on **December 10, 2008**, and the Notice of Appeal filed **March 10, 2009**, Appellants respectfully submit Appellants' Brief on Appeal pursuant to 37 C.F.R. § 41.37.

The Director is authorized to charge \$540.00 fee for filing an Appeal Brief pursuant to 37 C.F.R. § 41.20(b)(2). The Director is further authorized to charge any additional fees that may be due, or credit any overpayment of same to Deposit Account No. 033975 (Ref. No. 062070-0311777).

**REQUIREMENTS OF 37 C.F.R. § 41.37**

**I. REAL PARTY IN INTEREST - 37 C.F.R. § 41.37(c)(1)(i)**

By virtue of the Assignment recorded May 16, 2002 at reel 012901, frame 0562, the real party in interest is Novell, Inc.

**II. RELATED APPEALS AND INTERFERENCES - 37 C.F.R. § 41.37(c)(1)(ii)**

Appellants are aware of no related appeals or interferences.

**III. STATUS OF CLAIMS - 37 C.F.R. § 41.37(c)(1)(iii)**

Pending: Claims 27-46 are pending.

Cancelled: Claims 1-26 have been cancelled.

Rejected: Claims 27-40 and 42-46 stand rejected.

Allowable Subject Matter: Claim 41 has been indicated as allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

On Appeal: Claims 27-40 and 42-46 are appealed.

**IV. STATUS OF AMENDMENTS - 37 C.F.R. § 41.37(c)(1)(iv)**

No amendments have been filed subsequent to the mailing of the Final Office Action on December 10, 2008 (hereinafter "Final Action").

**V. SUMMARY OF CLAIMED SUBJECT MATTER - 37 C.F.R. § 41.37(c)(1)(v)**

The following exemplary citations to the Specification and drawing figures are not

exclusive, as other examples of support for the claimed subject matter exist. As such, the following citations should not be viewed as limiting.

**A. Independent Claim 27.**

One aspect of Appellants' invention relates to a computer implemented method for enabling a plurality of users at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems [e.g., FIG. 1; FIG. 3; Abstract].

One aspect of Appellants' invention comprises storing in a course database course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise; [e.g., pg. 6, lines 25-28]

One aspect of Appellants' invention comprises receiving a request to connect to a remote system from at least one user; [e.g., FIG. 2; pg. 7, lines 19-20]

One aspect of Appellants' invention comprises accessing, by the remote system, the course database to determine one or more courses associated with the user; [e.g., FIG. 2; pg. 7, lines 28-29]

One aspect of Appellants' invention comprises transmitting, by the remote system, a list of the courses associated with the user to the respective client system associated with the user; [e.g., FIG. 2; pg. 8, lines 1-2]

One aspect of Appellants' invention comprises receiving, by the remote system, a selection of at least one of the courses in the course list from the user; [e.g., FIG. 2; pg. 8, lines 5-6]

One aspect of Appellants' invention comprises accessing, by the remote system, the course database to determine one or more exercises associated with the selected course; [e.g., FIG. 2; pg. 8, lines 6-7]

One aspect of Appellants' invention comprises transmitting, by the remote system, a list of the exercises associated with the selected course to the respective client system associated with the user; [e.g., FIG. 2; pg. 8, lines 9-10]

One aspect of Appellants' invention comprises receiving, by the remote system, a selection of at least one of the exercises in the transmitted exercise list from the user; [e.g., FIG. 2; pg. 8, lines 12-13]

One aspect of Appellants' invention comprises accessing, by the remote system, the course database to determine at least one virtual machine associated with the selected exercise; [e.g., FIG. 2; pg. 8, lines 13-15]

One aspect of Appellants' invention comprises launching, by the remote system, the virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; [e.g., FIG. 2; pg. 8, lines 17-21] and

One aspect of Appellants' invention comprises transmitting, by the remote system, a view of the user interface to the respective client system associated with the user, wherein the user performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface. [e.g., FIG. 2; pg. 8, line 22 – pg. 9, line 1]

**B. Independent Claim 32.**

One aspect of Appellants' invention relates to a computer implemented method for enabling a plurality of students at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems [e.g., FIG. 1; FIG. 3; Abstract].

One aspect of Appellants' invention comprises storing in a course database associated with a remote system course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise; [e.g., pg. 6, lines 25-28]

One aspect of Appellants' invention comprises accessing, by the remote system, the course database to determine one or more courses associated with at least one student; [e.g., FIG. 2; pg. 7, lines 28-29]

One aspect of Appellants' invention comprises displaying for the student, at the respective client system associated with the student, a list of the courses associated with the student; [e.g., pg. 8, lines 1-3]

One aspect of Appellants' invention comprises upon receiving a selection of at least one of the displayed courses from the student, displaying for the student, at the respective client system associated with the student, a list of exercises associated with the selected course; [e.g., pg. 8, lines 3-11] and

One aspect of Appellants' invention comprises upon receiving a selection of at least one of the displayed exercises from the student, [e.g., pg. 8, lines 11-12]

launching, by the remote system, at least one virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; [e.g., FIG. 2; pg. 8, lines 17-21] and

displaying for the student, at the respective client system associated with the student, a view of the user interface, wherein the student performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface. [e.g., pg. 8, line 22 – pg. 9, line 1]

**C. Independent Claim 36.**

One aspect of Appellants' invention relates to a system for enabling a plurality of students at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems, each of the plurality of respective client systems having a respective web browser and a respective viewer application. [e.g., FIG. 1; FIG. 3; Abstract; pg. 7, lines 1-6]

One aspect of Appellants' invention comprises a server remote from the plurality of respective client systems; [e.g., FIG. 3, element 302]

One aspect of Appellants' invention comprises a plurality of computer systems coupled to the remote server, each computer system associated with at least one course and comprising: [e.g., FIG. 3, elements 380(a), ..., 380(n)]

a virtual machine platform for running virtual machines, [e.g., FIG. 3, element 122; pg. 9, lines 20-24]

a virtual machine launcher for launching the virtual machines on the virtual machine platform, [e.g., FIG. 3; element 397; pg. 9, lines 20-24] and

a remote display server for handling sessions between the virtual machines and the plurality of respective client systems; [e.g., FIG. 3; element 124; pg. 9, lines 20-24] and

One aspect of Appellants' invention comprises a course database that stores course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise, the course database coupled to the remote server, wherein the system is operable to: [e.g., FIG. 3; element 130; pg. 6, lines 25-28]

access the course database to determine one or more courses associated with at least one student; [e.g., FIG. 6A; pg. 12, lines 14-15]

transmit a list of the courses associated with the student to the respective client system associated with the student; [e.g., FIG. 6A; pg. 12, lines 17-18]

receive a selection of at least one of the courses in the course list from the respective client system associated with the student; [e.g., FIG. 6A; pg. 12, lines 21-22]

transmit a list of exercises associated with the selected course to the respective client system associated with the student; [e.g., FIG. 6A; pg. 12, lines 26-29]

receive a selection of at least one of the exercises in the transmitted exercise list from the respective client system associated with the student; [e.g., FIG. 6A; pg. 12, lines 28-30]

select one of the plurality of computer systems based on the selected course; [e.g., FIG. 6B; pg. 13, lines 1-7 and lines 15-16]

invoke the virtual machine launcher at the selected computer system to launch at least one virtual machine associated with the selected exercise, wherein the launched virtual machine runs on the virtual machine platform at the

selected computer system and generates a user interface for performing the selected exercise; [e.g., FIG. 6B; pg. 13, lines 15-19 and lines 22-25; pg. 8, lines 17-21] and

launch the remote display server at the selected computer system to handle a session with the respective client system associated with the student, wherein the remote display server is operable to transmit views of the user interface to the respective viewer application at the respective client system during the session, the respective viewer application displaying the view of the user interface to the student, wherein the student performs the selected exercise by remotely interacting with the virtual machine during the session via the views of the user interface. [e.g., FIGs. 2 and 6B; pg. 8, line 21 – pg. 9, line 1; pg. 14, lines 1-13]

**D. Independent Claim 42.**

One aspect of Appellants' invention relates to a computer readable medium for enabling a plurality of users at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems [e.g., FIG. 1; FIG. 3; Abstract; pg. 4, lines 21- pg. 5, lines 4].

One aspect of Appellants' invention comprises the computer readable medium comprising computer-executable instructions for:

storing in a course database course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise; [e.g., pg. 6, lines 25-28]

receiving a request to connect to a remote system from at least one user; [e.g., FIG. 2, pg. 7, lines 19-20]

accessing, by the remote system, the course database to determine one or more courses associated with the user; [e.g., FIG. 2, pg. 7, lines 28-29]

transmitting, by the remote system, a list of the courses associated with the user to the respective client system associated with the user; [e.g., FIG. 2, pg. 8, lines 1-2]

receiving, by the remote system, a selection of at least one of the courses in the course list from the user; [e.g., FIG. 2, pg. 8, lines 5-6]

accessing, by the remote system, the course database to determine one or more exercises associated with the selected course; [e.g., FIG. 2, pg. 8, lines 6-7]

transmitting, by the remote system, a list of the exercises associated with the selected course to the respective client system associated with the user; [e.g., FIG. 2, pg. 8, lines 9-10]

receiving, by the remote system, a selection of at least one of the exercises in the transmitted exercise list from the user; [e.g., FIG. 2, pg. 8, lines 12-13]

accessing, by the remote system, the course database to determine at least one virtual machine associated with the selected exercise; [e.g., FIG. 2, pg. 8, lines 13-15]

launching, by the remote system, the virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; [e.g., FIG. 2, pg. 8, lines 17-21] and

transmitting, by the remote system, a view of the user interface to the respective client system associated with the user, wherein the user performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface. [e.g., FIG. 2; pg. 8, line 22 – pg. 9, line 1]

**E. Independent Claim 46.**

One aspect of Appellants' invention relates to a computer implemented method for enabling a plurality of users at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems. [e.g., FIG. 1; FIG. 3; Abstract]

One aspect of the Appellants' invention comprises storing in a course database course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise. [e.g., pg. 6, lines 25-28]

One aspect of the Appellants' invention comprises receiving a request to connect to a remote system from at least one user. [e.g., FIG. 2, pg. 7, lines 19-20]



One aspect of the Appellants' invention comprises accessing, by the remote system, the course database to determine one or more courses associated with the user. [e.g., FIG. 2; pg. 7, lines 28-29]

One aspect of the Appellants' invention comprises transmitting, by the remote system, a list of the courses associated with the user to the respective client system associated with the user. [e.g., FIG. 2, pg. 8, lines 1-2]

One aspect of the Appellants' invention comprises receiving, by the remote system, a selection of at least one of the courses in the course list from the user. [e.g., FIG. 2, pg. 8, lines 5-6]

One aspect of the Appellants' invention comprises accessing, by the remote system, the course database to determine one or more exercises associated with the selected course. [e.g., FIG. 2, pg. 8, lines 6-7]

One aspect of the Appellants' invention comprises transmitting, by the remote system, a list of the exercises associated with the selected course to the respective client system associated with the user. [e.g., FIG. 2, pg. 8, lines 9-10]

One aspect of the Appellants' invention comprises receiving, by the remote system, a selection of at least one of the exercises in the transmitted exercise list from the user. [e.g., FIG. 2, pg. 8, lines 12-13]

One aspect of the Appellants' invention comprises selecting, by the remote system, at least one available virtual machine launcher associated with the selected course, wherein the selected virtual machine launcher is running on a computer onto which the selected course is installed, the computer being associated with remote system. [e.g., FIG. 6B; pg. 13, lines 1-7 and lines 15-16]

One aspect of the Appellants' invention comprises transmitting, by the remote system, a message including at least one identifier that identifies the selected exercise to the selected virtual machine launcher, [e.g., pg. 13, lines 17-22] wherein the selected virtual machine launcher is operable to:

access the course database to determine at least one virtual machine associated with the selected exercise; [e.g., e.g. pg. 13, lines 22-25] and

launch the virtual machine associated with the selected exercise,  
wherein the launched virtual machine generates a user interface for  
performing the selected exercise. [e.g., pg. 13, lines 22-25, pg. 8, lines 17-24]

One aspect of the Appellants' invention comprises transmitting, by the remote system, a view of the user interface to the respective client system associated with the user, wherein the user performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface. [e.g., pg. 8, line 21 – pg. 9, line 1; pg. 14, lines 1-13]

**F. Dependent Claims 28-31, 33-35, 37-40, and 43-45.**

Claims 28-31, 33-35, 37-40, and 43-45 are dependent claims argued separately.

**1. Dependent Claim 28.**

Dependent claim 28 recites: wherein the client system comprises a web browser and a viewer application for displaying the view of the user interface. [e.g., pg. 7, lines 1-6]

**2. Dependent Claim 29.**

Dependent claim 29 recites:

transmitting, by the remote system, a page to the client system, the page including at least one selectable user interface element associated with the launched virtual machine; and

receiving a selection of the at least one user interface element from the user.  
[e.g., pg. 8, lines 22-24]

**3. Dependent Claim 30.**

Dependent claim 30 recites: further comprising generating the view of the user interface in response to receiving the selection of the user interface element [e.g., pg. 9, lines 3-11]

4. **Dependent Claim 31.**

Dependent claim 31 recites: launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying the view of the user interface to the user, the remote display server refreshing the view in response to the user interacting with the view of the user interface during the session. [e.g., pg. 8, line 21 – pg. 9, line 11]

5. **Dependent Claim 33.**

Dependent claim 33 recites: displaying for the student a page including one or more selectable user interface elements associated with the launched virtual machine. [e.g., pg. 8, lines 21-24]

6. **Dependent Claim 34.**

Dependent claim 34 recites: further comprising upon receiving a selection of at least one of the displayed user interface elements from the student, generating the view of the user interface [e.g., pg. 9, lines 3-11]

7. **Dependent Claim 35.**

Dependent claim 35 recites: launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying for the student the view of the user interface, the remote display server refreshing the view in response to the student interacting with the view of the user interface during the session. [e.g., pg. 8, line 21 – pg. 9, line 11]

8. **Dependent Claim 37**

Dependent claim 37 recites: wherein the virtual machine launcher runs on the selected computer system onto which the selected course is installed [e.g., pg. 13, lines 15-16].

**9. Dependent Claim 38**

Dependent Claim 38 recites: wherein the system is further operable to access the course database to determine the virtual machine associated with the selected exercise.  
[e.g., pg. 8, lines 13-15]

**10. Dependent Claim 39.**

Dependent claim 39 recites: wherein the remote display server at the selected computer system is further operable to transmit a page to the respective client system, the page including at least one selectable user interface element associated with the launched virtual machine. [e.g., pg. 14, lines 1-6]

**11. Dependent Claim 40.**

Dependent claim 40 recites: wherein the remote display server at the selected computer system is further operable to:

receive a selection of the at least one user interface element from the student;  
[e.g., pg. 14, lines 15-17]

generate a view of the user interface in response to receiving the selection of the user interface element; [e.g., pg. 14, lines 18-26] and

refresh the view in response to the student interacting with the view of the user interface during the session. [e.g., pg. 14, lines 18-26]

**12. Dependent Claim 43.**

Dependent claim 43 recites: further comprising computer-executable instructions for:

transmitting, by the remote system, a page to the client system, the page including at least one selectable user interface element associated with the launched virtual machine; and

receiving a selection of the at least one user interface element from the user.  
[e.g., pg. 8, lines 22-24]

13. **Dependent Claim 44.**

Dependent claim 44 recites: further comprising computer-executable instructions for generating the view of the user interface in response to receiving the selection of the user interface element [e.g., pg. 9, lines 3-11]

14. **Dependent Claim 45.**

Dependent claim 45 recites: further comprising computer-executable instructions for launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying the view of the user interface to the user, the remote display server refreshing the view in response to the user interacting with the view of the user interface during the session. [e.g., pg. 8, line 21 – pg. 9, line 11]

VI. **GROUND OF REJECTION TO BE REVIEWED ON APPEAL - 37 C.F.R. § 41.37(c)(1)(vi)**

Claims 27-40 and 42-46 stand rejected under 35 U.S.C. § 102(e) as allegedly being anticipated by U.S. Patent No. 6,941,105 to Rowley et al. (hereinafter, "Rowley") [Final Action, pg. 4].

VII. **ARGUMENTS - 37 C.F.R. § 41.37(c)(1)(vii)**

The rejection of each of claims 27-40 and 42-46 should be reversed for the reasons set forth herein. Each claim is argued separately. They do not stand or fall together.

A. **REJECTIONS UNDER 35 U.S.C. § 102**

The rejection of claims 27-40 and 42-46 under 35 U.S.C. § 102(e) as allegedly being anticipated by Rowley constitutes legal error for at least the reason that Rowley neither explicitly nor impliedly discloses each of the elements of claimed invention. Indeed, "[a] prior art reference anticipates a patent claim if the reference discloses, either expressly or inherently, all of the limitations of the claim." *Metabolite Laboratories, Inc. v. Laboratory Corporation of America Holdings*, 370 F.3d 1354, 1367, 71

U.S.P.Q. 2d (BNA) 1081, 1090 (Fed. Cir. 2004) (quoting *EMI Group N. Am., Inc. v. Cypress Semiconductor Corp.*, 268 F.3d 1342, 1350, 60 U.S.P.Q. 2d (BNA) 1423, 1429 (Fed. Cir. 2001) (citation omitted)).

i) Independent Claims 27, 32, 36, 42 and 46

Claim 27

Independent claim 27, for example, includes several recitations pertaining to operations for *remotely* performing exercises:

A computer implemented method for enabling a plurality of users at a plurality of respective client systems to *remotely perform one or more respective exercises using the plurality of respective client systems*, the method comprising:

...

receiving a request to *connect to a remote system* from at least one user;  
accessing, *by the remote system*, the course database to determine one or more courses associated with the user;

transmitting, *by the remote system*, a list of the courses associated with the user *to the respective client system* associated with the user;

receiving, *by the remote system*, a selection of at least one of the courses in the course list from the user;

accessing, *by the remote system*, the course database to determine one or more exercises associated with the selected course;

transmitting, *by the remote system*, a list of the exercises associated with the selected course *to the respective client system* associated with the user;

receiving, *by the remote system*, a selection of at least one of the exercises in the transmitted exercise list from the user;

accessing, *by the remote system*, the course database to determine at least one virtual machine associated with the selected exercise;

launching, *by the remote system*, the virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; and

transmitting, *by the remote system*, a view of the user interface *to the respective client system* associated with the user, wherein the user *performs the selected exercise by remotely*

*interacting with the virtual machine via the view of the user interface.*

Claim 27 separately recites client systems that are used by users to perform exercises, and a remote system. As claimed, the system that is used by the user is a client system. To enable the users to perform the exercises, the client system communicates with the remote system. By way of example, claim 27 recites "transmitting, by the remote system, a list of courses... to the respective client system..."; "transmitting, by the remote system, a list of the exercises ... to the respective client system ..."; and transmitting, by the remote system, a view of the user interface to the respective client system ...".

Rowley, by contrast, discloses a system and method for configuring a standalone classroom computer for use in the IT classroom. The standalone classroom computer is configured by an instructor to *enable a student to perform an exercise using only the standalone classroom computer*, as the standalone classroom computer can execute multiple virtual machines concurrently. Rowley clearly discloses a single *standalone classroom computer* 102 [e.g., See FIG. 1 of Rowley] which is configured by the instructor and is also used by the student to perform the exercise [See, for example, Rowley at col. 5, lines 16-20 and lines 41-43; and col. 7, lines 16-17]. As such, Rowley discloses a single computer that is used by the student to perform the exercise. There is no remote system separate from the standalone classroom computer in Rowley.

Moreover, in Rowley, if multiple students want to perform exercises simultaneously, multiple classroom computers would need to be manually configured by the instructor. Also, the student needs to physically go to the classroom and use the standalone computer configured by the instructor to perform the exercise.

On the other hand, per various embodiments of Appellants' invention, client systems used by users to remotely perform exercises do not require elaborate on-site configuration by the instructor. In order to perform the exercise remotely, the client systems utilize a web browser and a viewer application that displays a view of a user interface generated by a virtual machine launched by the remote system (as recited in Appellants' claim 28, for example). Since, Appellants' client systems do not comprise

virtual machine platforms or virtual machines, the client systems do not require elaborate configuration by the instructor. Also, the user need not physically go to a classroom to perform the exercise [See, for example, Appellants' Specification at pg. 8, lines 1-5].

As such, Rowley fails to disclose at least a method wherein a user *connects to a remote system* using his respective client system to remotely perform an exercise by interacting with at least one virtual machine via a view of a user interface generated by the virtual machine.

**a. Rowley fails to disclose various claimed operations involved in remotely performing one or more exercises.**

The Examiner concedes that Rowley fails to explicitly teach that the claimed accessing, transmitting, receiving, and launching operations are performed remotely (i.e., by the remote system). [Final Action, pg. 5]. Nonetheless, the Examiner erroneously alleges that these features are inherently taught by Rowley. Specifically, the Examiner alleges, without support that: "[a]lthough Rowley et al fail to explicitly teach the accessing, transmitting, receiving and launching features are made remotely, *it is inherent that these steps are performed on separate remote machines*. The mere fact that the course material is stored onto a server/virtual machine and accessed by the user at a another machine that loads the course data from the server/virtual machine (col. 5, lines 16-65), implies that the loading and accessing of the course data is done "remotely"." [Final Action, pg. 5].

The Examiner's assertion is factually flawed. As demonstrated above, Rowley fails to disclose a remote system. Thus, Examiner's assertions pertaining to "separate remote machines" or "course material being stored on a server/virtual machine or accessed by the user at another machine" are unsupported and improper.

The Examiner always bears the initial burden to develop reasons supporting a reliance on inherency. To satisfy this burden, the Examiner must identify some basis in fact or articulate some reasoning at least tending to show that allegedly inherent subject matter necessarily (i.e., inevitability) flows from cited art. Indeed, "In relying upon the



theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Inter. 1990).

*Examiner has not met the initial burden of providing rationale or evidence tending to show inherency*

Since a basis in fact and technical reasoning is required when inherency is invoked, a failure to provide such evidence or rationale is fatal to the reliance on this doctrine. To the extent that the Examiner attempts to provide some reasoning to support her reliance on the doctrine of inherency, this reasoning is deficient because it appears to, at best, address the accessing features of the claimed invention. The Examiner has provided no rationale or evidence at least tending to show that the claimed transmitting, receiving, and launching features inevitably flow from the disclosures of Rowley. Consequently, the Examiner's reliance on inherency is at least partly unsupported and thus improper.

*The allegedly inherent features do not necessarily flow from the teachings of Rowley*

The alleged inherency is premised on the assumption that the accessing, transmitting, receiving, and launching features are performed on separate remote machines. As claimed, these operations (i.e., accessing, transmitting, receiving, and launching) are performed by the remote system. Rowley, as demonstrated above, fails to disclose a remote system. Rowley discloses a single standalone classroom computer and does not mention any remote machines separate from the classroom computer. Because Rowley does not disclose the claimed remote system, Rowley does not necessarily perform the accessing, transmitting, receiving, and launching features by a remote system. By way of example, assuming *arguendo*, that Rowley's classroom computer discloses the claimed respective client system (as the Examiner alleges); Rowley fails to disclose at least the claimed transmitting operations. In other words, Rowley fails to

disclose a remote system that transmits to the standalone classroom computer: i) a list of the courses associated with the user; ii) a list of the exercises associated with the selected course; and iii) a view of the user interface generated by a launched virtual machine for performing a selected exercise. Because there is no remote system, there is no support for the allegation that these operations must be performed by a remote system.

Moreover, the reasoning provided by the Examiner to support her reliance on the doctrine of inherency with respect to the claimed accessing features is also flawed. As mentioned above the Examiner alleges that "[t]he mere fact that the course material is stored onto a server/virtual machine and accessed by the user at a another machine that loads the course data from the server/virtual machine (col. 5, lines 16-65), implies that the loading and accessing of the course data is done "remotely"."

The Examiner's reasoning is factually flawed because, in Rowley, the instructor/user does not access course material at another machine which is separate from the classroom computer, much less, another machine that loads the course data from the classroom computer. In fact, the citations provided by the Examiner describe a course management software module (of the classroom computer) that is executed by an instructor when he desires to configure the classroom computer so that it can be used by a student who desires to perform classroom exercises. (See Rowley at col. 5, lines 16-65). Thus, when the instructor is configuring the classroom computer, the instructor is at the standalone computer and not at another machine separate from the classroom computer.

As such, there is no support that the allegedly inherent subject matter necessarily flows from the teachings of Rowley and, in fact, is contradicted by the express disclosure of Rowley. In sum, the Examiner concedes that Rowley does not teach that the claimed accessing, transmitting, receiving, and launching operations are performed remotely (i.e., by the remote system) and any reliance on the doctrine of inherency to provide this necessary teaching is unsupported.

Rowley fails to disclose the feature "accessing, by the remote system, the course database to determine one or more courses associated with the user"

Rowley discloses that the exercise loader software module (ELSM) *included in the standalone classroom computer* accesses the classroom database to determine the names of courses available to the student. Specifically, the ELSM determines the courses that have been installed on the classroom computer and displays those course names to the student (See column 2, lines 64-67; and column 6, lines 35-38). By contrast, per various embodiments of Appellants' invention, the course database is accessed to determine one or more courses that are *associated with the user*.

For at least the above-mentioned reasons, Rowley fails to disclose expressly or inherently all the features of Appellants' claim 27. As such, the rejection of claim 27 is improper and must be reversed.

**Claim 32**

Claim 32 includes features similar to those set forth in claim 27. Thus, the rejection of claim 32 is improper for at least the same reasons given relative to claim 27. However, claim 32 recites additional features that the Examiner fails to address.

Additionally, claim 32 at least recites the feature "storing in a course database *associated with a remote system* course information ..." Rowley, as demonstrated above, fails to disclose a remote system. As such, Rowley's alleged database is not associated with a remote system, as claimed.

For at least this additional reason, the rejection of claim 32 is improper and must be reversed.

**Claim 36**

Claim 36 includes features similar to those set forth in claim 27. Thus, the rejection of these claims is improper for at least the same reasons given relative to claim 27. However, claim 36 recites additional features that the Examiner fails to address.

For example, claim 36 at least recites the features:

enabling a plurality of students at a plurality of respective  
client systems to remotely perform one or more respective

exercises using the plurality of respective client systems, each of the plurality of respective client systems having a respective web browser and a respective viewer application, the system comprising:

*a server remote from the plurality of respective client systems;*

*a plurality of computer systems coupled to the remote server, each computer system associated with at least one course and comprising:*

*a virtual machine platform for running virtual machines,  
a virtual machine launcher for launching the virtual machines on the virtual machine platform, and  
a remote display server for handling sessions between the virtual machines and the plurality of respective client systems*

....

*... the course database coupled to the remote server, wherein the system is operable to:*

....

*launch the remote display server at the selected computer system to handle a session with the respective client system associated with the student, wherein the remote display server is operable to transmit views of the user interface to the respective viewer application at the respective client system during the session, the respective viewer application displaying the view of the user interface to the student, wherein the student performs the selected exercise by remotely interacting with the virtual machine during the session via the views of the user interface*

The Examiner has failed to address, in the Final Action, at least the above-mentioned features relating to a server being remote from a plurality of respective client systems that each have a respective web browser and a respective viewer application; and a plurality of computer systems coupled to the remote server comprising the elements mentioned above. This fails to establish a prima facie rejection under section 102. Additionally, as demonstrated above, Rowley discloses only a standalone classroom computer. Thus, Rowley cannot disclose at least these features of claim 36.

For at least this additional reason, the rejection of claim 36 is improper and must be reversed.

**Claim 42**

Claim 42 includes features similar to those set forth in claim 27. Thus, the rejection of claim 42 is improper for at least the same reasons given relative to claim 27. Additionally, claim 42 recites a computer readable medium comprising computer executable instructions for performing various steps relating to a remote system. Rowley does not disclose this. For at least these reasons, the rejection of claim 42 is improper and must be reversed.

**Claim 46**

Claim 46 includes features similar to those set forth in claim 27. Thus, the rejection of these claims is improper for at least the same reasons given relative to claim 27. However, claim 46 recites additional features that the Examiner fails to address.

For example, claim 46 at least recites the features:

- selecting, by the remote system, at least one available virtual machine launcher associated with the selected course, wherein the selected virtual machine launcher is running on a computer onto which the selected course is installed, the computer being associated with remote system;
- transmitting, by the remote system, a message including at least one identifier that identifies the selected exercise to the selected virtual machine launcher, wherein the selected virtual machine launcher is operable to: ...

The Examiner has failed to address, in the Final Action, at least these features of 46. This fails to establish a prima facie rejection under section 102. Additionally, as demonstrated above, Rowley discloses only a standalone classroom computer. Thus, Rowley cannot disclose at least these features of claim 46. For at least this additional reason, the rejection of claim 46 is improper and must be reversed.

**ii) Dependent Claims 28-31, 33-35, 37-40, and 43-45**

Because claims 28-31, 33-35, 37-40, and 43-45 depend from and add features to one of claims 27, 32, 36, and 42, the arguments presented above relative to the independent claims apply to the dependent claims as well. As such, rejections of the

dependent claims are likewise improper and should be reversed. In addition, these claims contain separate patentable subject matter.

Dependent Claim 28

Claim 28 recites: "wherein the client system comprises a web browser and a viewer application for displaying the view of the user interface." The Examiner erroneously alleges that Rowley teaches "a client system that displays the course and exercise information transmitted from the exercise loader module (col. 1, lines 49-62, col. 3, lines 1-16). The client system comprising a web browser and a viewer application for displaying the view of the user interface is inherent in a network communications where a client has a connection to the Internet and a monitor for displaying content on a graphical user interface."

To the extent the Examiner attempts to provide some reasoning to support her reliance on the doctrine of inherency, this reasoning is flawed because the allegedly inherent features do not necessarily flow from the teachings of Rowley. Rowley does not mention that the standalone computer may be connected to the Internet. Assuming *arguendo*, that Rowley's standalone classroom computer is connected to the Internet (though Appellants do not concede this); the standalone computer could still perform the functions locally on the standalone computer. Thus, the allegedly inherent claimed feature does not necessarily flow from the teachings of Rowley.

For at least these additional reasons, the rejection of claim 28 is improper and must be reversed.

Dependent Claims 29, 33, 39, and 43

Claim 29 recites: "transmitting, by the remote system, a page to the client system, the page including at least one selectable user interface element associated with the launched virtual machine; and receiving a selection of the at least one user interface element from the user."

As demonstrated above, Rowley fails to disclose the claimed remote system. As such, Rowley fails to disclose a remote system that transmits the claimed page including

at least one selectable user interface element associated with the launched virtual machine to the standalone classroom computer, and receives a selection of the user interface element (in the transmitted page) from the user.

Claims 33, 39, and 43 recite features similar to claim 29. For at least these additional reasons, the rejection of claims 29, 33, 39, and 43 is improper and must be reversed.

Dependent Claims 30, 34, and 44

Claim 30 recites "generating the view of the user interface in response to receiving the selection of the user interface element." The claimed user interface element is included in the page that is transmitted by the remote system. Since, Rowley fails to disclose that such a page that includes the user interface element is transmitted to the standalone classroom computer, Rowley does not disclose that the view of the user interface is generated in response to receiving the selection of the user interface element that is included in the transmitted page.

Claim 34 and 44 recite features similar to claim 30. For at least these additional reasons, the rejection of claims 34 and 44 is improper and must be reversed.

Dependent Claims 31, 35, 40, and 45

Claim 31 recites: "launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying the view of the user interface to the user, the remote display server refreshing the view in response to the user interacting with the view of the user interface during the session."

As demonstrated above, Rowley fails to disclose the claimed viewer application at the client system. Moreover, it is unclear as to which element of Rowley the Examiner is equating to the claimed remote display server. In any event, Rowley fails to disclose that a remote display server is launched to handle a session with a viewer application at the standalone classroom computer, wherein the viewer application displays the view of the user interface to the user. Also, Rowley fails to disclose that the remote display server

refreshes the view in response to the user interacting with the view of the user interface during the session.

Claims 35, 40, and 45 recite features similar to claim 31. For at least these additional reasons, the rejection of claims 31, 35, 40, and 45 is improper and must be reversed.

Dependent Claim 37

Claim 37 recites: "the virtual machine launcher runs on the selected computer system onto which the selected course is installed."

The selected computer system, as claimed, is coupled to a remote server. Rowley clearly fails to disclose a remote server. As such, Rowley fails to disclose that the virtual machine launcher runs on the selected computer system that is coupled to the remote server. For at least this reason, the rejection of claim 37 is improper and must be reversed.

Dependent Claim 38

Claim 38 recites: "wherein the system is further operable to access the course database to determine the virtual machine associated with the selected exercise."

The course database, as claimed, is coupled to a remote server. Rowley clearly fails to disclose a remote server. As such, Rowley fails to disclose that the course database that is coupled to the remote server is accessed to determine the virtual machine associated with the selected exercise. For at least this reason, the rejection of claim 38 is improper and must be reversed.

**VIII. CLAIMS APPENDIX - 37 C.F.R. § 41.37(c)(1)(viii)**

The pending claims (claims 27-46) are attached in **APPENDIX A**.

**IX. EVIDENCE APPENDIX - 37 C.F.R. § 41.37(c)(1)(ix)**

**APPENDIX B:** None.



X. RELATED PROCEEDINGS INDEX - 37 C.F.R. § 41.37(c)(1)(x)


APPENDIX C: None.

CONCLUSION

For at least the foregoing reasons, Appellants request that the rejection of claims 27-40 and 42-46 under 35 U.S.C. §102(e), be reversed.

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**APPENDIX A: CLAIMS APPENDIX**

27. (Previously Presented) A computer implemented method for enabling a plurality of users at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems, the method comprising:

storing in a course database course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise;

receiving a request to connect to a remote system from at least one user;

accessing, by the remote system, the course database to determine one or more courses associated with the user;

transmitting, by the remote system, a list of the courses associated with the user to the respective client system associated with the user;

receiving, by the remote system, a selection of at least one of the courses in the course list from the user;

accessing, by the remote system, the course database to determine one or more exercises associated with the selected course;

transmitting, by the remote system, a list of the exercises associated with the selected course to the respective client system associated with the user;

receiving, by the remote system, a selection of at least one of the exercises in the transmitted exercise list from the user;

accessing, by the remote system, the course database to determine at least one virtual machine associated with the selected exercise;

launching, by the remote system, the virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; and

transmitting, by the remote system, a view of the user interface to the respective client system associated with the user, wherein the user performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface.

28. **(Previously Presented)** The method of claim 27, wherein the client system comprises a web browser and a viewer application for displaying the view of the user interface.

29. **(Previously Presented)** The method of claim 27, further comprising:  
transmitting, by the remote system, a page to the client system, the page including at least one selectable user interface element associated with the launched virtual machine;  
and  
receiving a selection of the at least one user interface element from the user.

30. **(Previously Presented)** The method of claim 29, further comprising generating the view of the user interface in response to receiving the selection of the user interface element.

31. **(Previously Presented)** The method of claim 27, further comprising launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying the view of the user interface to the user, the remote display server refreshing the view in response to the user interacting with the view of the user interface during the session.

32. **(Previously Presented)** A computer implemented method for enabling a plurality of students at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems, the method comprising:

storing in a course database associated with a remote system course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise;

accessing, by the remote system, the course database to determine one or more courses associated with at least one student;

displaying for the student, at the respective client system associated with the student, a list of the courses associated with the student;

upon receiving a selection of at least one of the displayed courses from the student, displaying for the student, at the respective client system associated with the student, a list of exercises associated with the selected course; and

upon receiving a selection of at least one of the displayed exercises from the student,

launching, by the remote system, at least one virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; and

displaying for the student, at the respective client system associated with the student, a view of the user interface, wherein the student performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface.

33. **(Previously Presented)** The method of claim 32, further comprising displaying for the student a page including one or more selectable user interface elements associated with the launched virtual machine.

34. **(Previously Presented)** The method of claim 33, further comprising upon receiving a selection of at least one of the displayed user interface elements from the student, generating the view of the user interface.

35. **(Previously Presented)** The method of claim 32, further comprising launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying for the student the view of the user interface, the remote display server refreshing the view in response to the student interacting with the view of the user interface during the session.

36. **(Previously Presented)** A system for enabling a plurality of students at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems, each of the plurality of respective client systems

having a respective web browser and a respective viewer application, the system comprising:

- a server remote from the plurality of respective client systems;

- a plurality of computer systems coupled to the remote server, each computer system associated with at least one course and comprising:

- a virtual machine platform for running virtual machines,

- a virtual machine launcher for launching the virtual machines on the virtual machine platform, and

- a remote display server for handling sessions between the virtual machines and the plurality of respective client systems; and

- a course database that stores course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise, the course database coupled to the remote server, wherein the system is operable to:

- access the course database to determine one or more courses associated with at least one student;

- transmit a list of the courses associated with the student to the respective client system associated with the student;

- receive a selection of at least one of the courses in the course list from the respective client system associated with the student;

- transmit a list of exercises associated with the selected course to the respective client system associated with the student;

- receive a selection of at least one of the exercises in the transmitted exercise list from the respective client system associated with the student;

- select one of the plurality of computer systems based on the selected course;

- invoke the virtual machine launcher at the selected computer system to launch at least one virtual machine associated with the selected exercise, wherein the launched virtual machine runs on the virtual machine platform at the selected computer system and generates a user interface for performing the selected exercise; and

launch the remote display server at the selected computer system to handle a session with the respective client system associated with the student, wherein the remote display server is operable to transmit views of the user interface to the respective viewer application at the respective client system during the session, the respective viewer application displaying the view of the user interface to the student, wherein the student performs the selected exercise by remotely interacting with the virtual machine during the session via the views of the user interface.

37. **(Previously Presented)** The system of claim 36, wherein the virtual machine launcher runs on the selected computer system onto which the selected course is installed.

38. **(Previously Presented)** The system of claim 36, wherein the system is further operable to access the course database to determine the virtual machine associated with the selected exercise.

39. **(Previously Presented)** The system of claim 36, wherein the remote display server at the selected computer system is further operable to transmit a page to the respective client system, the page including at least one selectable user interface element associated with the launched virtual machine.

40. **(Previously Presented)** The system of claim 39, wherein the remote display server at the selected computer system is further operable to:

- receive a selection of the at least one user interface element from the student;
- generate a view of the user interface in response to receiving the selection of the user interface element; and
- refresh the view in response to the student interacting with the view of the user interface during the session.

41. **(Previously Presented)** The system of claim 36, wherein the virtual machine launcher is operable to register configuration information and the course information with the course database, the configuration information including a unique identifier for the

virtual machine launcher and a port number for the remote display server to accept session connections, the course information further including a list of courses associated with the virtual machine launcher.

42. **(Previously Presented)** A computer readable medium for enabling a plurality of users at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems, the computer readable medium comprising computer-executable instructions for:

- storing in a course database course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise;

- receiving a request to connect to a remote system from at least one user;

- accessing, by the remote system, the course database to determine one or more courses associated with the user;

- transmitting, by the remote system, a list of the courses associated with the user to the respective client system associated with the user;

- receiving, by the remote system, a selection of at least one of the courses in the course list from the user;

- accessing, by the remote system, the course database to determine one or more exercises associated with the selected course;

- transmitting, by the remote system, a list of the exercises associated with the selected course to the respective client system associated with the user;

- receiving, by the remote system, a selection of at least one of the exercises in the transmitted exercise list from the user;

- accessing, by the remote system, the course database to determine at least one virtual machine associated with the selected exercise;

- launching, by the remote system, the virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; and

- transmitting, by the remote system, a view of the user interface to the respective client system associated with the user, wherein the user performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface.



43. **(Previously Presented)** The computer readable medium of claim 42, further comprising computer-executable instructions for:

transmitting, by the remote system, a page to the client system, the page including at least one selectable user interface element associated with the launched virtual machine; and

receiving a selection of the at least one user interface element from the user.

44. **(Previously Presented)** The computer readable medium of claim 43, further comprising computer-executable instructions for generating the view of the user interface in response to receiving the selection of the user interface element.

45. **(Previously Presented)** The method of claim 42, further comprising computer-executable instructions for launching a remote display server to handle a session with a viewer application at the client system, the viewer application displaying the view of the user interface to the user, the remote display server refreshing the view in response to the user interacting with the view of the user interface during the session.

46. **(Previously Presented)** A computer implemented method for enabling a plurality of users at a plurality of respective client systems to remotely perform one or more respective exercises using the plurality of respective client systems, the method comprising:

storing in a course database course information including a list of exercises, and for a given exercise one or more virtual machines associated with the exercise;

receiving a request to connect to a remote system from at least one user;

accessing, by the remote system, the course database to determine one or more courses associated with the user;

transmitting, by the remote system, a list of the courses associated with the user to the respective client system associated with the user;

receiving, by the remote system, a selection of at least one of the courses in the course list from the user;

accessing, by the remote system, the course database to determine one or more exercises associated with the selected course;

transmitting, by the remote system, a list of the exercises associated with the selected course to the respective client system associated with the user;

receiving, by the remote system, a selection of at least one of the exercises in the transmitted exercise list from the user;

selecting, by the remote system, at least one available virtual machine launcher associated with the selected course, wherein the selected virtual machine launcher is running on a computer onto which the selected course is installed, the computer being associated with remote system;

transmitting, by the remote system, a message including at least one identifier that identifies the selected exercise to the selected virtual machine launcher, wherein the selected virtual machine launcher is operable to:

access the course database to determine at least one virtual machine associated with the selected exercise; and

launch the virtual machine associated with the selected exercise, wherein the launched virtual machine generates a user interface for performing the selected exercise; and

transmitting, by the remote system, a view of the user interface to the respective client system associated with the user, wherein the user performs the selected exercise by remotely interacting with the virtual machine via the view of the user interface.

APPENDIX B

EVIDENCE APPENDIX - 37 C.F.R. § 41.37(c)(1)(ix)

NONE.

APPENDIX C

RELATED PROCEEDINGS INDEX - 37 C.F.R. § 41.37(c)(1)(x)

NONE.